REMARKS

Applicant would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe the subject matter which applicant regards as the invention.

Claims 1-3, 5-11, and 14-18 are currently pending in the present application. Claims 1, 5, 6, and 7 have been amended herein. It is believed that the application is now in condition for allowance. Reconsideration is respectfully requested.

Claims 1 was rejected under 35 U.S.C. 102(b) as being anticipated by Haberlein et al. (U.S. Patent No. 6,109,251). Claim 1 has been amended herein to substantially include the limitations of claim 4, which has been rejected under 35 U.S.C. 103(a) as being unpatentable over Haberlein in view of Okuda et al. (U.S. Patent No. 6,273,049). Accordingly, arguments made herein with respect to claim 1 will be addressed as if rejected under the combination of Haberlein and Okuda et al. Traversal of this rejection is made for at least the following reasons. The combination of Haberlein and Okuda et al. does not teach or suggest, a vibration mechanism coupled to a portion of the crankcase, as recited in claim 1.

The Examiner concedes that Haberlein does not disclose a means for vibrating the crankshaft that includes a vibration mechanism coupled to a portion of the crankcase. Thus, the Examiner relies on Okuda et al. in an attempt to make up for the deficiencies of Haberlein. Specifically, the Examiner relies on a vibration plate 61 of an experiment apparatus (See Fig. 10) of Okuda et al. as being equivalent to the claimed vibration mechanism coupled to a portion of a crankcase. The Examiner then contends that it would have been obvious to couple the vibration plate 61 of Okuda et al. to the crankcase of Haberlein. Applicant disagrees. Okuda et al. does not disclose, teach, or suggest utilizing vibration plate 61 in an engine. Rather, the vibration plate 61 is merely part of an *experiment apparatus* and is utilized to *simulate* normal engine vibration. One skilled in the art would not have been motivated by the Okuda et al. to couple an engine vibration simulator to a crankcase of an engine. The engine of Haberlein is already producing the vibration that the simulator is simulating.

Because neither Haberlein nor Okuda et al., alone or in combination, teach or suggest each and every limitation set forth in claim 1, the combination of Haberlein and Okuda et al. cannot render obvious claim 1. Withdrawal of this rejection is respectfully requested.

Claims 2, 3, 17 and 18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Haberlein et al. Traversal of this rejection is made for at least the following reasons. As conceded by the Examiner, Haberlein does not disclose a means for vibrating including a crankcase having a wall thickness of about 1.5mm and/or less than 1.5mm. Thus, the Examiner argues that it would have been an obvious design choice for one skilled in the art to modify Haberlein in the manner claimed. The Examiner further states,

> applicant has not disclosed that the means for vibrating the crankcase includes the crankcase having a wall thickness of about 1.5 mm and/or less than 1.5 mm would solve a specific problem. Further ... [a] crankcase having a wall thickness of about 1.5 mm and/or less than 1.5 mm would vibrate the crankcase the same way as conventional crankcase having a wall thickness of about 2.5mm. (emphasis in original).

Contrary to the Examiner's statements, paragraph [0014] of the specification states, "[t]he present invention provides a crankcase 26 that has a wall at least 1.0 mm thinner than conventional crankcases. The thinness of the crankcase wall facilitates resonation and/or amplification of the engine's vibration source." Further, there is nothing within Haberlein that would teach or suggest to one skilled in the art to modify the thickness of a crankcase. Haberlein expressly discloses that oil is misted *via rapidly moving parts*. There is nothing within Haberlein that discloses, teaches, or suggests that oil is misted in the engine *via a vibration of the crankcase*. Accordingly, one skilled in the art would not have been motivated to facilitate resonation and/or amplification of the engine's crankcase, as the crankcase is not a "rapidly moving part".

Because Haberlein fails to teach or suggest each and every limitation set forth in claims 2, 3, 17 and 18, Haberlein cannot render obvious such claims. Okuda does not remedy the short falling of Hagerlein. Withdrawal of this rejection is requested.

Claims 4, 5 and 7 were rejected under 35 U.S.C. 103(a) as being unpatentable over Haberlein in view of Okuda et al. Traversal of this rejection is made for at least the following reasons. The limitations of claim 4 have been substantially incorporated into the claim 1, which is believed to be allowable for at least the reasons discussed above. Accordingly, claim 4 has been cancelled herein. Claims 5 and 7 have been amended to depend from claim 1. Accordingly, withdrawal of this rejection is respectfully requested.

Claim 6 was rejected under 35 U.S.C. 103(a) as being unpatentable over Haberlein in view of Okuda et al. Traversal of this rejection is made for at least the following reasons. The Examiner concedes that the combination of Haberlein and Okuda et al. does not disclose a vibration mechanism being a vibration spring. The Examiner contends that it would have been obvious to modify Haberlein in view of Okuda et al. by employing a vibration spring in lieu of the vibration plate 61 of Okuda et al. First, this proposition requires a presumptive leap that the person of ordinary skill would even proceed as such. It is respectively submitted that the Examiner has failed to uncover the claimed structure and has thus merely pronounced the structure to be a design choice. It is respectfully submitted that such an approach is not proper. Moreover, even assuming, *arguendo*, that this proposition was true, one skilled in the art would only be motivated to modify the experimental apparatus of Okuda et al. such that the apparatus for simulating normal engine vibration is a vibration spring. As discussed above, there is nothing within either Haberlein or Okuda et al. that provides motivation to couple an engine vibration simulator of an experimental apparatus to a crankcase of an engine.

For at least these reasons, the combination of Haberlein and Okuda et al. fails to teach or suggest a vibration spring to vibrate a crankcase of an engine, as required by claim 6. Withdrawal of this rejection is requested.

Claims 8-11, 14 and 15 were rejected under 35 U.S.C. 103(a) as being unpatentable over Haberlein in view of Tamba et al. (U.S. Patent No. 4,762,098). Traversal of this rejection is made for at least the following reasons. The Examiner concedes that Haberlein does not disclose a clearance area located in the crankcase of less than 10mm and/or about 1.5mm. Thus, the Examiner relies on Tamba in an attempt to make up for the deficiencies of Haberlein. However, Tamba does not disclose that a clearance area located in the crankcase is less than 10mm and/or about

1.5mm. In fact, any dimension or specific mention of the clearance area in Tamba is absent. Thus Tamba fails to provide claim limitation for which is is proffered, Tamba merely teaches the utilization of a crank arm 29 to stir lubricating oil in the bottom of the crank chamber 25, which results in filling of the crank chamber 25 with lubricating oil mist. Also it is submitted that even if Tamba did disclose a clearance area located in the crankcase is less than 10mm and/or about 1.5mm, one of ordinary skill in the art would not be motivated by the lubricating structure of Tamba to modify the clearance area in Haberlein because Haberlein does not use the crank arm to stir lubricating oil in the bottom of the crank chamber as Tamba does.

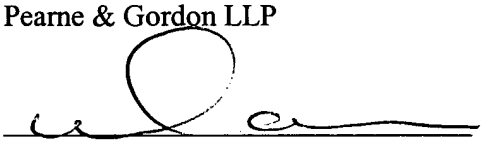
Because neither Haberlein nor Tamba et al., alone or in combination, teach or suggest each and every limitation set forth in claims 8-11, 14, and 15, the combination of Haberlein and Tamba et al. cannot render obvious such claims. Withdrawal of this rejection is respectfully requested.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haberlein in view of Tamba as applied to claims 11, 14 and 15 above, and further in view of Okuda. Traversal of this rejection is made for at least the following reasons. As discussed herein, there is nothing within any of the cited references that discloses, teaches, or suggests utilizing a vibration mechanism coupled to a crankcase of an engine. Haberlein et al. discloses utilizing rapidly moving parts in the engine to mist oil; Tamba discloses utilizing a crank arm to mist oil; and Okuda et al. only discloses a vibration mechanism in connection with an experimental apparatus to simulate normal engine vibration. Further, claim depends from claim 15, which is believed to be allowable for at least the reasons discussed above. Withdrawal of this rejection is respectfully requested.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any fees resulting from this communication, please charge such fees to our Deposit Account No. 16-0820, Order No. 35703.

Respectfully submitted,
Pearne & Gordon LLP



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